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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,157	09/19/2003	Mutsumi Katayama	HGM-108-A	8732

21828 7590 07/27/2006

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EXAMINER	
NGUYEN, TUAN HOANG	
ART UNIT	**PAPER NUMBER**
2618	

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/667,157	KATAYAMA ET AL.	
	Examiner	Art Unit	
	Tuan H. Nguyen	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8, 10-21 and 23-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Lempio et al. (US PAT. 6,831,896 hereinafter, "Lempio").

Consider claim 1, Lempio teaches a wireless network system for use with two vehicles, system comprising: a first relay device (see fig. 1 item 14a1) including first (see fig. 2A item 30a) and second (see fig. 2A item 30b) Bluetooth modules, each of the first and second Bluetooth modules capable of performing a cable communication

irrespective of which is a master or slave (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one first wireless terminal (see fig. 2B item 14) including a third Bluetooth module, wherein the first and third Bluetooth modules structure a first piconet in which the first Bluetooth module is a master, and the third Bluetooth module is a slave (col. 4 lines 19-24), the second Bluetooth module structures a second piconet (see fig. 1 item 20a and col. 4 lines 33-50); and wherein the first piconet and the second piconet structure a network (col. 4 lines 33-50).

Consider claim 2, Lempio further teaches a second relay device including a fourth Bluetooth module (see fig. 1 col. 2 lines 62-65); and at least one second wireless terminal including a fifth Bluetooth module, wherein the second (see fig.1 item 14a1), fourth (see fig.1 item 14a2), and fifth Bluetooth modules (see fig.1 item 42) structure a second piconet in which the fourth Bluetooth module is a master, and the second and fifth Bluetooth modules are slaves (see figs. 1, 2A and 2B col. 4 lines 19-32).

Consider claim 3, Lempio further teaches a second relay device including fourth and sixth Bluetooth modules, each of the fourth and sixth Bluetooth modules capable of performing a cable communication irrespective of which is a master or slave (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); at least one second wireless terminal including a fifth Bluetooth module; the second and fourth Bluetooth modules structure a third piconet in which the fourth Bluetooth module is a master, and the second Bluetooth module is a slave; wherein the fifth and sixth Bluetooth modules structure a third piconet

in which the sixth Bluetooth module is the master, and the fifth Bluetooth module is the slave; and wherein the first, second, and third piconets structure a network (see figs. 1, 2A and 2B col. 4 lines 19-32).

Consider claim 14, Lempio teaches in a wireless network system constructed by a plurality of Bluetooth terminals, wherein the system comprises: a first relay device (see fig. 1 item 14a1) including (see fig. 2A item 30a) and second (see fig. 2A item 30b) Bluetooth modules, each of the Bluetooth modules performs a cable communication irrespective of which is a master/slave (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one first wireless terminal (see fig. 2B item 12) including a third Bluetooth module, and in the method, the first and third Bluetooth modules communicate with each other on a first piconet in which the first Bluetooth module is a master, and the third Bluetooth module is a slave (col. 4 lines 19-24), the second Bluetooth module communicates with any one of the other Bluetooth modules on a second piconet (see fig. 1 item 20a and col. 4 lines 33-50), and the first Piconet and the other piconet structure a network (col. 4 lines 33-50).

Consider claims 4 and 17, Lempio further teaches the first and third Bluetooth modules communicate with each other with transmission electricity conforming to a class 2 or 3 (read on broadcast range of several meters, e.g. class 3 has the maximum range is 10 meters) of a Bluetooth standard (col. 1 lines 25-28).

Consider claims 5 and 18, Lempio further teaches the second, fourth, and fifth Bluetooth modules communicate with one another with transmission electricity conforming to a class 1 (read on high power mode, e.g. class 1 has a power up to 100 milliwatts compares to class 3 is 1 milliwatts) of a Bluetooth standard (col. 3 lines 60-65).

Consider claims 6 and 19, Lempio further teaches the fifth Bluetooth module includes means for restricting transmission electricity (col. 1 lines 25-28).

Consider claims 7 and 20, Lempio further teaches the second and fourth Bluetooth modules communicate with each other with transmission electricity conforming to a class 1 of a Bluetooth standard (col. 3 lines 60-65).

Consider claims 8 and 21, Lempio further teaches the fifth and sixth Bluetooth modules communicate with each other with transmission electricity conforming to a class 2 or 3 of a Bluetooth standard (col. 1 lines 25-28).

Consider claims 10 and 23, Lempio further teaches in the first relay device, the first and second Bluetooth modules are controlled by common control means (see fig. 2A col. 4 lines 33-41).

Consider claims 11 and 24, Lempio further teaches the first and second Bluetooth modules and the control means are connected together via a bus (see fig. 2A col. 4 lines 33-41).

Consider claims 12 and 25, Lempio further teaches in the second relay device, the fourth and sixth Bluetooth modules are controlled by common control means (see fig. 2A col. 4 lines 33-41).

Consider claims 13 and 26, Lempio further teaches the fourth and sixth Bluetooth modules and the control means are connected together via a bus (see fig. 2A col. 4 lines 33-41).

Consider claim 15, Lempio further teaches the system comprises: a second relay device including a fourth Bluetooth module (see fig. 1 col. 2 lines 62-65); and at least one second wireless terminal including a fifth Bluetooth module, and in the method, the second, fourth, and fifth Bluetooth modules communicate with one another on a second piconet in which the fourth Bluetooth module is a master, and the second and fifth Bluetooth modules are a slaves (see figs. 1, 2A and 2B col. 4 lines 19-32), and the first and second piconets structure a network (col. 4 lines 33-50).

Consider claim 16, Lempio further teaches the system comprises: a second relay device including fourth and sixth Bluetooth modules, and each of the Bluetooth modules

performs a cable communication irrespective of which is a master/slave (see figs. 1, 2A and 2B col. 3 line 66 through col. 4 line 32); and at least one second wireless terminal including a fifth Bluetooth module, and in the method, the second and fourth Bluetooth modules communicate with one another on a third Piconet in which the fourth Bluetooth module is a master, and the second Bluetooth module is a slave, the fifth and sixth Bluetooth modules communicate with each other on a third piconet in which the sixth Bluetooth module is the master, and the fifth Bluetooth module is the slave (see figs. 1, 2A and 2B col. 4 lines 19-32), and the first, second, and third piconets structure a network (col. 4 lines 33-50).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lempio et al. (US PAT. 6,831,896 hereinafter, "Lempio") in view of Tuomela (U.S PUB. 2003/0235179 hereinafter, "Tuomela").

Consider claims 9 and 22, Lempio teaches the wireless network system of claims 1 and 14 above, respectively.

Lempio does not explicitly show that an SCO link or an ACL link is established between the Bluetooth modules.

In the same field of endeavor, Tuomela teaches an SCO link or an ACL link is established between the Bluetooth modules (page 1 [0005]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use, an SCO link or an ACL link is established between the Bluetooth modules, as taught by Tuomela, in order to provide wireless relay networks also exist which, in effect, extend an operating range of a local RF system by using specific LPRF communication devices referred to as relay devices to interface with and provide communication between two or more user's communication devices.

Conclusion

6. Any response to this action should be mailed to:

Mail Stop_____ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571) 273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay A. can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information Consider the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Quochien B. Vuong 7/24/06

Tuan Nguyen
Examiner
Art Unit 2618

QUOCHIEN B. VUONG
PRIMARY EXAMINER